MINISTRY OF HEALTH UGANDA

A REPORT ON THE ACTUAL CATARACT SURGICAL RATE, HUMAN RESOURCE FOR EYE HEALTH, STATE OF INFRASTRUCTURE, AVAILABILITY AND CONDITION OF EYE HEALTH EQUIPMENTS IN UGANDA

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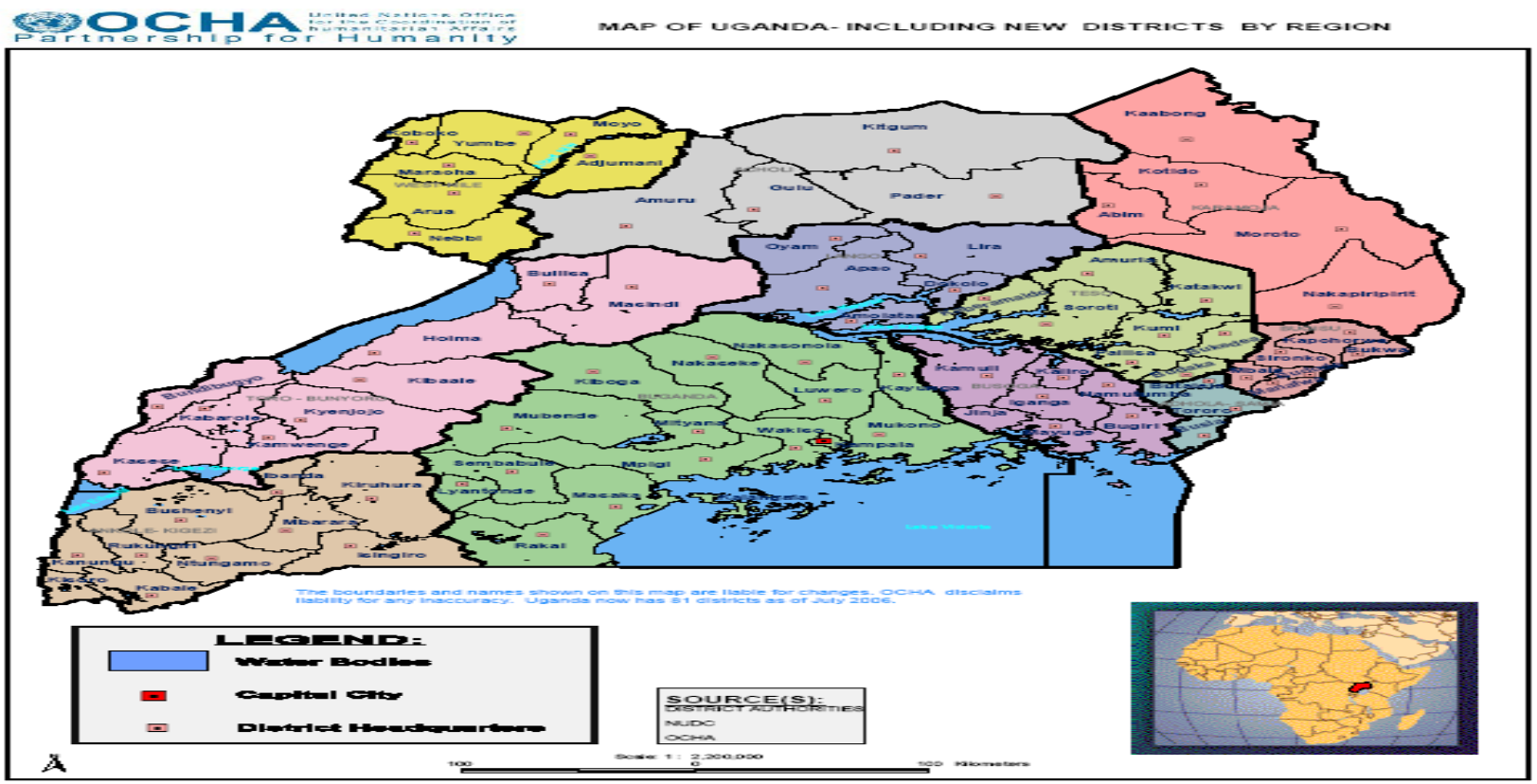
MAP OF UGANDA SHOWING HEALTH REGIONS



INTRODUCTION

- Cataract is a surgical condition in which the natural lens of the eye becomes progressively opaque resulting in blurred vision.
- Causes 48% of global blindness. Main non-modifiable factor is aging
- Cataract surgical rate is the number of cataract operations performed in a year per million population
- To perform cataract surgery you must have trained personnel, appropriate equipments , good infrastructure and adequate supplies and sundries
- WHO estimates that 18 million people are bilaterally blind from cataracts
- Treatment is cataract surgery with insertion of an intraocular lens(IOL)

FACILITIES OFFERING CS

1. National Referral Hospital
2. Regional Referral Hospitals
3. Private for Profit Tertiary centers
4. Private Not for Profit Tertiary centers
5. General Hospitals (outreach basis)
6. HC IVs (outreach basis)

Human Resources for Eye Health

1. Ophthalmologists
2. Optometrists
3. Cataract Surgeons
4. Ophthalmic Clinical Officers
5. Theatre Nurses
6. General Nurses attached to Eye theatres/units

JUSTIFICATION

In Uganda the Actual cataract service delivery indicators were not known partly because eye care delivery has been predominantly in the hands of many NGOs for example SS, CBM, BHVI, LFTW, LAN, Lions clubs, Rotary clubs and of recent many PFPs eg ASG, Agarwal, PNFPs eg Ruharo, BEH, Mengo hospital and a number of these units are high volume and yet not sharing data on the work they do

Justification cont'd

- The National eye health plan (2016-2020) estimated CSR 400, Journal Community Eye Health (2015) put it at 150,seva-country-fact sheet(2014) put it at 192
- This prompted the NPBC to embark on the long journey of establishing the Actual CSR for Uganda to aid future planning
- This study was also to fulfill the Research Agenda of the fourth eye health strategic plan 2016-2020
- The recommendations of this study shall be incorporated in the National development plan111 as a contribution to the eye health component

OBJECTIVES OF THE STUDY

The Broad objective was;

To determine the Actual cataract service indicators in Uganda

2015-2019

Specific objectives

1. To determine the Actual cataract surgical rate (CSR)
2. To map out the National Eye Health personnel by cadre and location
3. To find out about the available infrastructure/ equipment and their state in each centre offering cataract services

METHODOLOGY

Study design, setting and selection procedure;

- This was retrospective study design with a country wide scope.
- The study setting included all health facilities offering cataract services.
- All facilities offering cataract services were enrolled in the study irrespective of type of ownership Gov't, PFPs, PNFPs.

Methodology cont'd

Sampling frame and procedure

- The sample comprised of all facilities in Uganda that provide cataract services and possess data which is shared and/or not shared with MOH through District Health Information systems(DHIS-2).
- The sampling frame comprised all health facilities from HC 4 to the National Referral level that offer CS.

Methodology cont'd

Data collection

- The information was extracted from facility level CS registers or data bases 2015-2019

Collection of site descriptive data

- Descriptive data was collected using site description questionnaires.
- Questionnaires were administered by trained research teams to unit /theatre in charges. Variables of interest included:

1. Site location(urban, peri urban, rural)
2. Type of ownership(MOH, PNFP, PFP)
3. Human Resource for Health (type of cadre)
4. State of the infrastructure(theatre ceiling, walls, water source, power source)
5. Available equipment and functionality

Methodology cont'd

Instruments for data collection

- Questionnaires for facility volume(no. CS performed)
- Check list of available HReH
- Check list of available and functional equipment
- A site description questionnaire

Appropriate interviewees were identified together with the in charges at each facility site

Ethical considerations

- This was an operational research under the mandate of the National eye health coordination office.
- Permission to access health facilities and records was sought from the Director General MOH, DHOs, Directors National and RRHs and in charges of HC4s

Limitations

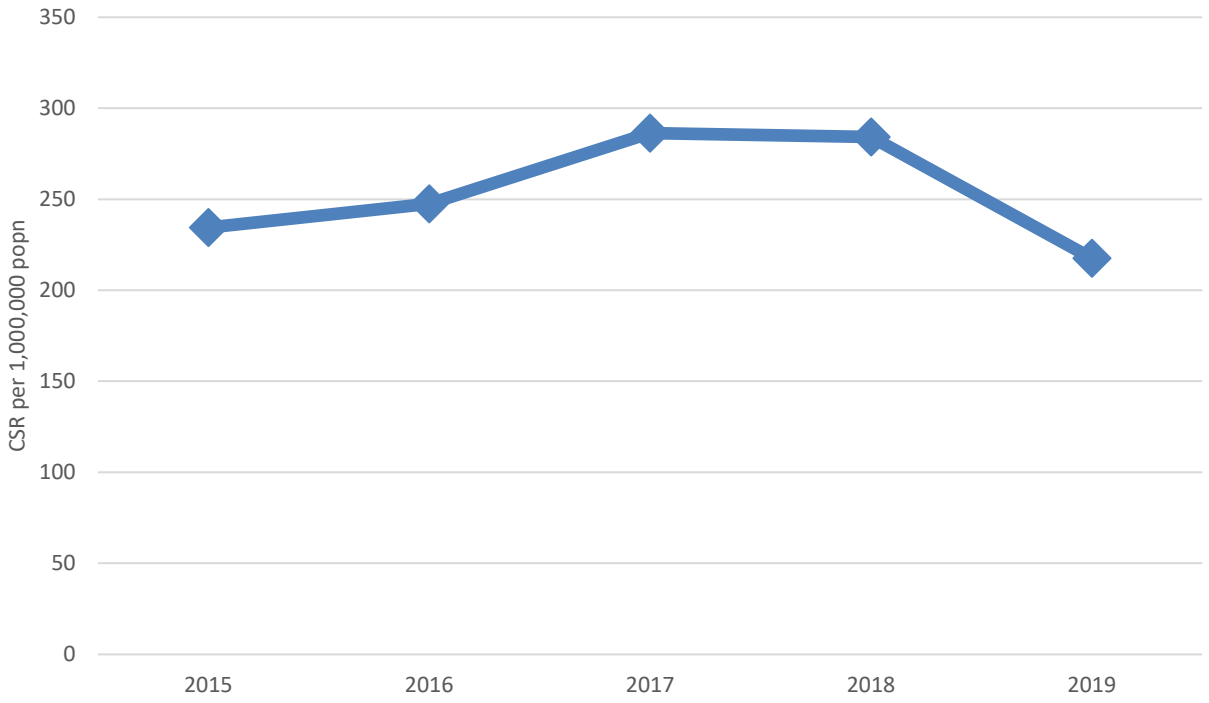
- Since data was abstracted from theatre registers, any information not recorded could have been missed
- Some volunteer service groups could have done CS but due to poor documentation, this information could have been missed
- Possibility that some data entrants could have missed recording some CS operations done especially during eye camps when the turn up is overwhelming

RESULTS

- A total of 129 health facilities were visited in the period Feb-June 2020.
- The CSR from 2015-2019 is shown in the table and graph below;

Results cont’d

Number	Year	CSR
1	2015	234.4
2	2016	247.5
3	2017	286.4
4	2018	284.2
5	2019	217.5


350
300
250
200
150
100
50
0
CSR per 1,000,000 popn
2015
2016
2017
2018
2019

Cataract surgeries by Gender(More Males had CS)

Year	Male	Female
2015	4303	4018
2016	4628	4445
2017	5608	5230
2018	5586	5513
2019	4394	4373
Total	24519	23579

CS by facility ownership(Gov't>PFPs , PNFPs)

Year	Government	PNFP	PFP
2015	3482	4444	395
2016	4586	3790	697
2017	6323	4226	289
2018	6483	4083	533
2019	5123	2973	671
Total	20874	19516	2585

CS by facility ownership

- More CS were performed in Government facilities than PNFPs and PFPs
- Worth noting is the high number of CS in 2016 performed by PFPs.

Cataract surgeries cont'd

- Kampala, Ankole,Bukedi and Busoga performed more cataract surgeries throughout the study period
- Bugisu, Kigezi, Tooro and Teso subregions persistently performed lowest cataract surgeries
- Although the number of cataract surgeries performed in Bunyoro subregion was generally low, it was noted that there was a progressive increase annually over the study period
- In Busoga and Teso regions, there was a sharp decline in the number of surgeries performed from 2017 onwards
- In South central subregion(Mubende area) there was a sharp increase in the number of cataract surgeries from 2018 onwards

On Human Resource for Health (HReH)

- The National RH and All tertiary eye units had an Ophthalmologist
- Proportion of RRHs with an Ophthalmologist 67.5%
- Lower level facilities GH and HC4s did not have an Ophthalmologist
- All levels of health facilities had an OCO.

Human Resource for eye Health in the visited facilities offering CS services

Ophthalmologists	40
Optometrists	9
Cataract Surgeons	4
Ophthalmic Clinical Officers	132
Ophthalmic Theatre Nurses	35
General Nurses	116

Equipments

- Many Government facilities lacked basic equipments to carry out Cataract Surgery
- Private for profit(PFP) and Private not for Profit(PNFP) were better equipped and are able to offer even the modern Cataract Surgical service(Phacoemulsification)

Infrastructure

- The theatre infrastructure(ceiling, floor, walls, ventilation) in all the facilities visited were in good condition regardless of ownership, Gov't. PFP PNFP
- Almost all facilities had safe water and are connected to the National grid

DISCUSSION

- CSR in Uganda is comparable to many African Countries e.g Ethiopia, Kenya where it was reported lower than 500, against WHO recommendation of 1000.
- In middle income countries e.g Peru,Mexico,Paraguay, the CSR is relatively higher 500 to 2000
- In Developed economies such as USA,Europe, Australia and Japan, CSR ranges from 4000 to 10,000.

Discussion cont'd

- The noticeable decline in CSR after 2017 could be explained by the phase out of some donor supported projects in a number of Regions e.g CES in Bunyoro, Busoga, Teso, West Nile and Acholi subregions while in others there was marked reduced financial support e.g Ankole and Bukedi
- The sharp increase in the number of CS performed from 2018 onwards in south central subregion (Mubende) could have been due to the interventions of a project Mubende CES by BHVI

CONCLUSIONS AND RECOMMENDATIONS

- Cataract surgical services as part of the general eye health services in Uganda should not be donor dependent
- Because of noticeable high cataract prevalence in the age group 60 years +, Government and partners should develop/strengthen initiatives such as SAGE and link them to services for CS. Like is already happening in Karamoja sub region
- In order to reduce the barriers women and girls face in regard to access to CS Services, programs that target vulnerable groups especially females, PWDs and Children should be promoted.
- In order to increase accessibility of CS services to the rural poor, Government and eye health partners should provide adequate HReH plus equipment and supplies to the lower health facilities.
- Government and eye health partners should increase accessibility to CS services in all health sub regions by promoting/developing high volume centers through increasing HReH, equipment and supplies.

CONCLUSIONS AND RECOMMENDATIONS cont'd

- Mechanisms to establish posts for Ophthalmologists and their career growth should be put in place for example establishing more posts for Senior Consultants. This is in addition to prompt recruitment, retention and motivation.
- The good practice of equitable distribution of OCOs through in service training should be maintained for promotion of early screening, early detection, referral and follow up of Cataract cases after surgery.
- In order to avail modern CS services (phacoemulsification), to the majority ordinary Ugandans, this service should be introduced in more Government units.
- The Uganda essential drug list should be revised to include more ophthalmic supplies such as IOLs, hyalase and viscoelastics.
- The existing infrastructure for cataract surgeries in the Country in Government, PFPs and PNFPs facilities should be well maintained.

CONCLUSIONS AND RECOMMENDATIONS cont'd

- Efforts to attract more partners in eye health should be encouraged especially in the currently underserved regions.
- Public awareness campaigns to promote CS services through increasing health seeking behavior among our population should be enhanced especially in the rural areas.
- The known barriers to cataract surgery should be overcome through initiatives that take services closer to the needy populations in the rural areas for instance CS outreaches.
- Continuous advocacy for increasing HReH should be prioritized by all stakeholders in eye health.
- Efforts to replace retired eye health workers especially Ophthalmologists should be expedited by all those concerned.
- Training institutions for Ophthalmologists (CHS/Mulago and MUST) should be supported with Training facilities such as wet lab, and appropriate training equipment and supplies.
- Comprehensive Ophthalmology scholarships for residents should be sought.

APPRECIATION

- We appreciate BHVI for the facilitation to conduct the research Agenda meeting of the NPBC and also this research.
- We thank the Government of Uganda for the conducive environment and favorable political will to improve eye care in this Country
- The research team is applauded for their input in making this study a reality

THANK YOU

FOR LISTENING